the old theory that the amniotic fluid is the product of the fetal kidneys; for, in this case, in spite of the absence of even a urethral orifice, there was a normal amount of amniotic fluid present.

The tracheo-esophageal fistula was evidently the immediate cause of death. Had it not been for this deformity, either the absence of the urinary system or the absence of the rectum with the associated imperforate anus would, of course, have produced death within a relatively few hours. The other deformities found would, presumably, have been consistent with life.

The only clew as to the possible cause of the many deformities exhibited in this case is the admission by the parents of the use of a chemical contraceptive prior to conception. Whether or not we are justified in assuming that, under such circumstances, injury to the germ cells may result in congenital deformities, is problematical.

SUMMARY

The case presented is that of a fetus of about thirty-two to thirty-four weeks of development, in which approximately eighteen single deformities were noted. Included in this list of deformities are the virtual absences of all of the essential parts of the urinary system.

Arcade Building, Colton.
College of Medical Evangelists, Loma Linda.

IODODERMA DUE TO LIPIODOL*

By SAUL S. ROBINSON, M.D.
Los Angeles

THE injection of iodized oil in the form of lipiodol has been employed since 1922 for bronchography and other diagnostic procedures.[1] In 1927, Belote[2] of the University of Michigan reported the first case of iododerma following a lipiodol injection. O'Donovan,[3] Carmichael[4] (two cases), Scadding[5] (two cases), and Goldstein[6] have since recorded six additional cases of iododerma following the injection of iodized oil. There have been no case reports from California. Two of the reported cases have been fatal and indicate the severe idiosyncrasy that a patient may show to lipiodol. A fatal issue may depend on the combination of a marked iodin idiosyncrasy and the large amount of iodized oil usually injected for diagnostic purposes (20 cubic centimeters). Because of the widespread use of lipiodol and the severity of the iododerma that may result from its administration, the following case report is considered of interest.

REPORT OF CASE

Mr. H. K., aged 60, consulted me on May 13, 1937, because of an eruption that had appeared on the previous day over the trunk, the neck, and the extremities. No subjective symptoms were associated with the skin lesions. The past history revealed that the patient had suffered from a cardiac and a bronchial disorder, and on April 26 he had been given an intratracheal injection of 20 cubic centimeters of lipiodol for bronchography. The patient had been in good health since the injection, but complained of a disagreeable taste, probably due to the coughing up of the iodized oil. The only medication taken internally had been theominal for cardiac pain.

The dermatologic examination revealed a discrete, erythematous, pinhead to pea-sized maculopapular eruption located on the chest, back, neck, upper extremities, and the thighs. No lesions were present on the mucous membranes of the mouth and the throat. No adenopathy was present. The Wassermann and Kahn reactions on the blood serum were negative. The urine showed a strongly positive test for the presence of iodin.

The dermatologic diagnosis was iododerma following an intratracheal injection of lipiodol. Enteric-coated sodium chlorid tablets in the doseage of 15½ grains three times daily were given, with rapid clearing of the eruption. The theominal was administered with no effect on the eruption.

COMMENT

The elimination of iodin from the body after an intratracheal lipiodol injection is effected mechanically and by absorption through the usual body channels. Mechanical elimination of the iodin occurs by coughing up and expectorating the iodized oil. Moeller and Von Magnus[7] found iodin present in the urine as early as six hours following a lipiodol injection. These investigators reported the peak of urinary iodin excretion to occur in twenty-four hours, with iodin absent after six days. Iglauer[8] also reported the absence of iodin in the urine after six days, with the presence of iodized oil in the lungs for many weeks after the injection. It is interesting to note, in view of the above findings, that my patient's urine contained iodin eighteen days after the lipiodol administration. This delayed iodin excretion may account for the delayed appearance of the iododerma in my case.

The infrequency of severe iodism and iododerma following lipiodol injection is probably due to the stable chemical combination of the iodin and the unsaturated fats in lipiodol. Lipiodol consists of a 40 per cent solution of mettaloid iodin in neutral poppy-seed oil. Cases of iododerma from iodized oil have been reported where the patients had received iodin previously in other forms such as potassium iodid without manifesting idiosyncrasies to the drug, but developing iododerma after a lipiodol injection. Inasmuch as severe iododermas may occur from lipiodol, it is unfortunate that there is no method of determining iodin idiosyncrasy in patients before the lipiodol administration.

1930 Wilshire Boulevard.

* From the Department of Dermatology, Cedars of Lebanon Hospital, Los Angeles.

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